

REMARKS

Claims 13 and 23 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Claims 13 to 23 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. Claims 13 to 23 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 12 to 17 and 21 to 23 were rejected under 35 U.S.C. §102(b) as being anticipated by either one of U.S. Patent No. 5,249,211 to Nagano et al. (hereinafter "Nagano") or U.S. Patent No. 4,689,195 to Aoyama et al. (hereinafter "Aoyama") or U.S. Statutory Invention Registration No. H722 to Sofer et al. (hereinafter "Sofer"). Claim 18 was rejected under 35 U.S.C. §102(b) as being anticipated by Nagano. Claim 19 was rejected under 35 U.S.C. as being anticipated by Nagano. Claim 20 was rejected under 35 U.S.C. §102(b) as being anticipated by Aoyama. Claims 24 and 25 were rejected under 35 U.S.C. §103(a) as being unpatentable over any one of Nagano or Aoyama or Sofer in view of U.S. Patent No. 3,930,938 to Berglund (hereinafter "Berglund").

Claims 12 and 22 have been amended to more clearly and particularly define the present invention. Support for the amendments can be found, for example, in the Substitute Specification on page 8, lines 30 to 31. One of claims 24 has been amended to correct the claim numbering and is now properly labeled claim 25. Claims 26 to 29 have been added. Support can be found, for example, in the Substitute Specification on page 7, lines 12 to 16.

Reconsideration of the application based on the following remarks is respectfully requested.

Interview Summary

Applicants' representative William Gehris (Reg. No. 38,156) and Examiner Palabrica conducted a telephonic interview on September 3, 2009, and Applicants' representative thanks Examiner Palabrica for his careful analysis and comments. The rejections were discussed, and Applicants' representative proposed amendments for claims 12 and 22 to best distinguish the invention from the prior art. It was recommended that the claims further

distinguish the PWR elements from the BWR elements, listing the structural elements found in a PWR within the claim language. No agreement was reached between the Applicants' representative and the Examiner regarding claims 12 and 22.

35 U.S.C. §112 Rejections

Claims 13 and 23 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Claims 13 to 23 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. Claims 13 to 23 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 13 and 23 have been amended to correct a typographical error. The word "containment" has been corrected to read "contaminant." Support can be found in the Substitute Specification on page 12, lines 4 to 6, for example.

Withdrawal of the rejections to claims 13 and 23 under 35 U.S.C. §112, first and second paragraph, is respectfully requested.

35 U.S.C. §102 Rejections

Claims 12 to 17 and 21 to 23 were rejected under 35 U.S.C. §102(b) as being anticipated by either one of Nagano or Aoyama or Sofer.

Nagano discloses "a plurality of kinds of fuel rods 12a to 12c having differences in their fuel enrichments are arranged in the channel box 11 as fuel rods 12, ... in which the fuel rods are classified into first, second, and third fuel rods 12a, 12b and 12c in accordance with the distribution of the enrichments." (Col. 7, lines 35 to 41).

Aoyama discloses a fuel assembly "in that the mean value of the quantity of the fissionable material loaded or packed in the fuel rod, per unit fuel rod, of the fuel rods of the outermost or peripheral layer is lowered than that of the other fuel rods of the other portions of the fuel assembly." (Col. 1, lines 56 to 61).

Sofer discloses a boiling water reactor in which “fuel rods located at the outside of the fuel assemblies and bordering the water in the control rod channel contain a novel type of ‘dual enrichment’ fuel pellet which has a lower concentration of uranium enrichment in its inner radial region near its longitudinal axis than in its outer radial region remote from the axis.” (Col. 1, lines 48 to 54).

As suggested by the Examiner to further define the structural differences of the present PWR invention, claims 12 and 22 are hereby amended to recite in part “wherein the outer peripheral layer of fuel rods defines an outer periphery of the fuel assembly.” Support can be found in the Substitute Specification on page 8, lines 30 to 31, for example.

Nagano, Aoyama and Sofer fail to teach or disclose “wherein the outer peripheral layer of fuel rods defines an outer periphery of the fuel assembly,” as recited in claims 12 and 22. The boiling water reactors of Nagano, Aoyama and Sofer use channel boxes to channel the cooling water, and the channel boxes of the prior art define the periphery of the fuel assembly.

Withdrawal of the rejection to claims 12 to 17 and 21 to 23 under 35 U.S.C. §102(b) is respectfully requested.

Claim 18 was rejected under 35 U.S.C. §102(b) as being anticipated by Nagano. Claim 18 is indirectly dependent on claim 12. In light of discussion above regarding claim 12, withdrawal of the rejection is respectfully requested.

Claim 19 was rejected under 35 U.S.C. as being anticipated by Nagano. Claim 19 is indirectly dependent on claim 12. In light of discussion above regarding claim 12, withdrawal of the rejection is respectfully requested.

Claim 20 was rejected under 35 U.S.C. §102(b) as being anticipated by Aoyama et al. Claim 20 is indirectly dependent on claim 12. In light of discussion above regarding claim 12, withdrawal of the rejection is respectfully requested.

35 U.S.C. §103 Rejections

Claims 24 and 25 were rejected under 35 U.S.C. §103(a) as being unpatentable over any one of Nagano or Aoyama or Sofer in view of Berglund. Claims 24 and 25 are indirectly dependent on claim 22. In light of discussion above regarding claim 22, withdrawal of the rejection is respectfully requested.

New Claims

Claims 26 to 29 have been added. Support for claims 26 to 29 can be found, for example, in the Substitute Specification on page 7, lines 12 to 16. New claims were also suggested by the Examiner.

It is respectfully submitted that these claims are patentable.

CONCLUSION

It is respectfully submitted that the application is in condition for allowance and applicants respectfully request such action.

If any additional fees are deemed to be due at this time, the Assistant Commissioner is authorized to charge payment of the same to Deposit Account No. 50-0552.

Respectfully submitted,

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